

January 3, 1996

**MEMORANDUM**

**TO:** Orville D. Green, Assistant Administrator  
Permits and Enforcement

**FROM:** Brian R. Monson, Chief *BRM*  
Operating Permits Bureau

**SUBJECT:** Issuance of Tier II Operating Permit #027-00059 to  
Nestlé Brands - Potato Division (Nampa)

**PURPOSE**

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the controls of Air Pollution in Idaho) for issuing Operating Permits.

**PROJECT DESCRIPTION**

This project is for the issuance of a Tier II Operating Permit for the Nestlé Brands - Potato Division facility located at Nampa, Idaho, in order to establish the facility as a synthetic minor source. Emission point sources existing at the facility are as follows: two (2) boilers, two (2) dryers, two (2) fryers, and one (1) cooler. Fugitive emission sources found at the facility are make-up air heaters and paved roads.

**SUMMARY OF EVENTS**

On May 15, 1995, the Division of Environmental Quality (DEQ) received an application for a Tier II Operating Permit. On June 14, 1995, the application was declared incomplete. On August 25, 1995, the submitted Tier II operating permit application for Nestlé Brands - Potato Division was determined complete. A public comment period was held from November 17, 1995, until December 18, 1995, on the air quality aspects of the proposed permit.

**RECOMMENDATIONS**

Based on the review of the Operating Permit application, applicable state and federal regulations concerning the permitting of air pollution sources, and public comments, the Bureau staff recommends that Nestlé Brands - Potato Division, in Nampa, be issued Tier II Operating Permit #027-00059. Staff also recommends that the facility be notified in writing of the obligation to pay permit application fees for the Tier II permit.

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cc: J. Palmer, SWIRO  
OP File Manual  
Source File  
COF

November 6, 1988

MEMORANDUM

TO: Brian R. Monson, Chief  
Operating Permits Bureau *BRM*  
Permits and Enforcement

FROM: Darin Mehr, Air Quality Engineer *DM*  
Operating Permits Bureau  
Robert Baldwin, Air Quality Engineer *RB*  
Operating Permits Bureau

THROUGH: Susan J. Richards, Air Quality Permits Manager  
Operating Permits Bureau

SUBJECT: Technical Analysis for Proposed Tier II Operating Permit #027-00069  
Nestlé Brands - Potato Division; Nampa, Idaho.

Purpose

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits (OP).

FACILITY DESCRIPTION

Nestlé Brands - Potato Division, located in Nampa, Idaho, processes raw potatoes into frozen french fries and other frozen potato products (tots, patties, etc.). The potato by-product is sold commercially for livestock feed. The facility consists of a processing area and raw potato storage cellars.

Project Description

This project is for an Operating Permit for the following existing point and fugitive emission sources.

Point Sources:

- (1) Boiler - Gas-fired with a maximum rated capacity of 50,000 pounds of steam per hour. The boiler was constructed in 1968.

Boiler Specifications:

Manufacturer:	Cleaver Brooks
Model:	DL-68-WL-1097
Max. Production:	50,000 lb steam/hr
Fuel:	Natural Gas

- (2) Boiler - Gas-fired with a maximum rated capacity of 100,000 pounds of steam/hr. The boiler was constructed or last modified in 1975.

Manufacturer:	Nebraska
Model:	NS-F-84
Max. Production:	100,000 lb steam/hr
Fuel:	Natural Gas

Process Equipment

- (4) Main Line Dryer, Gas-fired with a maximum rated capacity of 21.0 MM BTU/hr. The dryer was constructed in 1987.

Manufacturer:	National Drying
Model:	1987 Carn

- (5) Main Line Fryer, Steam heated.

Manufacturer:	Reas and Control
Model:	RT6029-3-1-3F

- (6) Specialty Line Dryer/Cooler unit, Steam heated Dryer.

Manufacturer: Proctor Schwartz  
Model: K21761

- (7) Specialty Line Fryer, Steam heated.

Manufacturer: Gem Equipment  
Model: 1700

Fugitive Sources:

- (1) Paved Roads.  
(2) Make-Up Air Units.

Make-Up Air Unit Specifications:

Unit ID	Make/Model	Rating
#204	Arrovent GasG3-32B4	3.0 MM BTU/hr
#205	Arrovent/G60	6.0 MM BTU/hr
#206	Aladdin/BA 490 DWD1	6.0 MM BTU/hr
#207	Unspecified/Aggregated	2.0 MM BTU/hr

A more detailed process description is found in the operating permit application materials.

SUMMARY OF EVENTS

On May 15, 1995, the Division of Environmental Quality (DEQ) received an application for a Tier II Operating Permit. On June 14, 1995, the application was declared incomplete. On July 26, 1995, DEQ received additional information from Nestle Brands. On August 25, 1995, the Tier II operating permit application for Nestle Brands was determined to be complete.

A public comment period is scheduled from November 17, 1995, to December 18, 1995.

DISCUSSION

1. Emission Estimates

Emission estimates were provided by Nestle Brands, Potato Division and can be seen in the May 15, 1995, application. DEQ also estimated the PM, SO<sub>2</sub>, NO<sub>x</sub>, CO, and the VOC emissions by using emission factors from AP-42, Section 1.4 (Natural Gas Combustion) emission estimate and natural gas usage comparison (see attachment).

The maximum PM emission rate for the facility was based on the requested 1,048 million cubic feet per year (MMcf/yr) of natural gas usage and the requested thirty (30) tons per year (T/yr) process related particulate matter emission limit in the application. VOC emissions limits were set in a manner consistent with those for PM.

NO<sub>x</sub> is the pollutant emitted in the greatest amount from the fuel burning equipment. The maximum emissions rate for that pollutant was estimated using 8760 hours for the non permitted equipment, which exceeded 100 T/yr of NO<sub>x</sub> for the facility. The applicant chose to net out of Tier I permitting requirements by limiting the potential to emit NO<sub>x</sub> emissions to less than 100 T/yr. The applicant chose to reduce the natural gas usage of the Nebraska boiler to 133 MMcf/yr. Therefore, the applicant has proposed an enforceable limit on NO<sub>x</sub> emissions for the Nebraska boiler of 36.6 T/yr. To limit the facility to 97.7 T/yr of NO<sub>x</sub> emissions, a total maximum natural gas usage for the entire facility's fuel burning equipment must be limited to less than 1,048 MMcf/yr.

Nestlé shall install a natural gas flow meter to monitor the Nebraska boiler's usage, and to verify that usage shall not exceed 133 MMcf/yr. Compliance determination for the gas usage for the facility and the Nebraska boiler can be verified by reporting the annual gas usage to DEQ on a rolling annual basis. This monitoring requirement can be fulfilled by the Permittee by maintaining a file of monthly invoices from the supplier for the facility-wide natural gas limit. The monitoring requirements for the Nebraska boiler must be achieved individually by the Permittee. Reports are to be kept at the facility and made available for review by DEQ personnel upon request.

Fugitive NO<sub>x</sub> emissions from the make-up air units were estimated by using emission factors found in AP-42, Section 1.4-1. It was assumed that the burners operate 3,760 hours per year. The Cleaver Brooks boiler also has the capacity of producing 30,000 lbs. of steam per hour for 3,760 hours per year.

Fugitive emission calculations can be determined from the application materials.

The emissions for the process lines were determined from source test and product flows supplied in the application. Emissions generated by the potato processing included particulate matter (PM) and volatile organic compounds (VOC). The Main Line Dryer emissions consist of both natural gas combustion and process emissions. These emissions were prorated to the maximum capacity to evaluate the particulate matter potential emissions. It was determined that the particulate matter emissions were less than thirty (30) T/yr. Therefore, at a maximum yearly throughput of 398,500 tons of raw product, Nestlé would not exceed 100 tons of emissions for PM or VOCs. Hazardous Air Pollutant (HAPs) emissions are not specifically limited by the proposed permit. HAP emission estimates were included in Nestlé's Tier II permit application and demonstrated nonmajor levels of HAP emissions (less than the 10/25 major HAP source thresholds). This allows the facility a thirty (30) T/yr maximum PM emission limit for the process lines. Raw product throughput is evaluated after rock/foreign debris removal.

Fugitive particulate emissions from the paved roads were calculated by the applicant by using emission factors from AP-42, Section 11.2.3.3. Fugitive PM emissions from vehicle traffic are not represented in the emission limits in Appendix A of the proposed permit. No additional source testing of process or natural gas combustion equipment shall be required by the proposed permit.

## 2. Modeling

No modeling was performed to assess ambient air quality impacts of this facility.

## 3. Area Classification

The Nestlé Brands, Potato Division facility is located at Nampa, Canyon County, Idaho as shown in Figure 1. This area is located in AQCR 64. The area is classified as attainment or unclassifiable for all federal and state criteria air pollutants (i.e., PM, PM-10, CO, NO<sub>x</sub>, VOCs, and SO<sub>x</sub>).

## 4. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.006.25. The facility is classified as an A2 source because the actual emissions of NO<sub>x</sub> are less than 100 tons per year.

## 5. Regulatory Review

This operating permit is subject to the following permitting requirements:

a.	<u>IDAPA 16.01.01.401</u>	Tier II Operating Permit
b.	<u>IDAPA 16.01.01.402</u>	Permit Requirements for Tier II Sources
c.	<u>IDAPA 16.01.01.403.01-04</u>	Opportunity for Public Comment
d.	<u>IDAPA 16.01.01.404.04</u>	Authority to Revise or Renew Operating Permits
e.	<u>IDAPA 16.01.01.406</u>	Obligation to Comply
f.	<u>IDAPA 16.01.01.470</u>	Permit Application Fees for Tier II Permits
g.	<u>IDAPA 16.01.01.628</u>	Visible Emission Limitation
h.	<u>IDAPA 16.01.01.650</u>	General Rules for the Control of Fugitive Dust
i.	<u>IDAPA 16.01.01.676</u>	Fuel Burning Equipment -- Particulate Matter
j.	<u>IDAPA 16.01.01.700</u>	Particulate Matter -- Process Weight Limitations

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees for Tier II permits of five hundred dollars (\$500.00). IDAPA 16.01.01.470 became effective on March 7, 1995.

RECOMMENDATIONS

Based on the review of the Tier II Operating Permit application and of applicable state and federal regulations concerning the permitting of air pollution sources, staff recommend that Nestlé Brands - Potato Division, in Nampa be issued a Tier II Operating Permit for the sources that exist at the facility. An opportunity for public comment on the air quality aspects of the proposed permit shall be provided as required by IDAPA 16.01.01.404.01. Staff also recommend that the facility be notified of the Tier II permit fee requirement in writing. This fee will be applicable upon issuance of the permit.

ADMINISTRATIVE: [unclear] Nestlé Brands, TAM

cc: J. Palmer, SWIRO  
Source File  
COF

**Nestle Brands, Potato Division Combustion Sources EMISSIONS INVENTORY**  
**Potential Emissions of Combustion Sources Fired on Natural Gas**

SOURCE	DESIGN HEAT INPUT (mmBTU/hr)	DESIGN Production RATE (lb steam/hr)	FUEL HEAT CONTENT (Btu/cf)	HOURLY FUEL Consumption (mm cf/hr)	PM/PM-10			NOx		
					Emission Factor (lb/E^6 cf)	hourly emission (lb/hr)	Annual Emissions (T/yr)	Emission Factor (lb/E^6 cf)	hourly emission (lb/hr)	annual emissions (T/yr)
Cleaver Brooks (201)	70	50,000	1034	0.068	13.7	0.927	4.062	140.0	9.478	41.5
Nebraska (202)	140	100,000	1034	0.135	5	0.677	0.333	550.0	74.468	36.6
Main Line Dryer (203)	21		1034	0.020	12	0.244	1.067	140.0	2.843	12.5
Make-up Air Unit (204)	3		1034	0.003	12	0.035	0.152	100.0	0.290	1.3
Make-up Air Unit (205)	6		1034	0.006	12	0.070	0.305	100.0	0.580	2.5
Make-up Air Unit (206)	6		1034	0.006	12	0.070	0.305	100.0	0.580	2.5
Misc. M.U. Air Unit (207)	2		1034	0.002	12	0.023	0.102	100.0	0.193	0.8
Subtotals with Nebraska Boiler:						2.02	6.22		88.24	97.7
Subtotals W/O Nebraska Boiler:						1.37	5.99		13.97	61.2

SOURCE	SOx			CO			VOCs		
	Emission Factor (lb/E^6 cf)	hourly emissions (lb/hr)	Annual Emissions (T/yr)	Emission Factor (lb/E^6 cf)	hourly emission (lb/hr)	Annual emissions (T/yr)	Emission Factor (lb/E^6 cf)	hourly emission (lb/hr)	Annual emissions (T/yr)
Cleaver Brooks (201)	0.600	0.041	0.178	35.000	2.369	10.378	2.784	0.188	0.826
Nebraska (202)	0.600	0.081	0.356	40.000	5.416	23.721	1.411	0.191	0.837
Main Line Dryer (203)	0.600	0.012	0.053	21.000	0.426	1.868	3.828	0.078	0.341
Make-up Air Unit (204)	0.600	0.002	0.008	21.000	0.061	0.267	3.828	0.011	0.049
Make-up Air Unit (205)	0.600	0.003	0.015	21.000	0.122	0.534	3.828	0.022	0.097
Make-up Air Unit (206)	0.600	0.003	0.015	21.000	0.122	0.534	3.828	0.022	0.097
Misc. M.U. Air Unit (207)	0.600	0.001	0.005	21.000	0.041	0.178	6	0.012	0.051
Subtotals with Nebraska Brl:		0.14	0.63	8.52		37.30	0.51		2.15
Subtotals W/O Nebraska Brl:		0.06	0.27	3.14		13.76	0.33		1.36

Where: (Note: All emission factors are from EPA AP-42 Section 1.4 Natural Gas Combustion)

Heat Input = ( # lb steam/hr ) \* ( 1400 Btu/lb steam ) Note: 1400 Btu/lb steam from EPA AP-42 Appendix A

Emissions (lb/hr) = Heat Input (mm Btu/hr) \* ( 1 / Fuel Heat Content (Btu/cf) ) \* Emission Factor (lb/mm cubic feet gas)

Emissions (tons/yr) = Emissions (lb/hr) \* 8760 hours operation/year \* ( 1 ton / 2000 lb )

**Nebraska Boiler Annual Emission Limits Methodology:**

Allowable Emission (ton/yr) = Emission Factor (lb/mm cf gas) \* 133 mm cf gas/yr / 2000 lb/ton

All other allowables are based on 8760 hr/yr

Specially Line Dryer (Source #303) is run off of steam from boiler(s) and is identified only as a piece of process equipment.

(Not to be separately considered)

Emission Unit (#)	Natural Gas Consumed (mm cf/yr)
201	593
202	133
203	178
204	25
205	51
206	51
207	17
Total:	1048

Responses to Public Comments Submitted During the Public Comment Period Extending from  
November 17, 1995, to December 18, 1995,  
on the Nestlé Brands Potato Division (Nampa)  
Tier II Synthetic Minor Operating Permit

COMMENTS AND RESPONSES:

OVERVIEW:

There were two (2) submittals received during the public comment period that pertained to the air quality aspects of the proposed Tier II Operating Permit (Permit #027-00059). The comments are answered according to the order that they were received. A submittal from Nestlé Brands was received on December 15, 1995. A submittal from Nettie Smoot, Golden Eagle Audubon, and the Idaho Concerned Citizens for Sensible Mining was received on December 18, 1995.

GENERAL PROCESS

Comment #1: Section 1.1 Process Description.

Change "The facility is a potato processing plant which produces frozen processed potato products (french fries, tater tots, patties, etc.)..

To "...frozen processed potato products (french fries and formed products.).."

Reason: The term tater tots is a brand name. The generic term for these type of products is 'formed products'.

DEQ Response: The permit text has been altered as requested.

Comment #2: Section 1.1.2 Specialty Line; Paragraph 1.

Change "The Main Line processes potatoes into french fries, while the Specialty Line processes small potatoes and potato by-product from the Main Line into formed potato products, such as tater tots and hashbrown patties."

To "...into formed potato products, such as cylinders, rounds, and hashbrown patties."

Reason: The term tater tots is a brand name. Types of formed products are cylinders, rounds, and triangles.

DEQ Response: The permit text has been altered as requested.

Comment #3: Paragraph 2.

Change "The water soaked debris and dirt from the clarifier are temporarily stored on-site and hauled to suitable disposal areas."

To "The water soaked debris are temporarily stored on-site..."

Reason: Dirt from the clarifier is not temporarily stored on-site and hauled to suitable disposal areas. The solids removed from the clarifier are utilized as a by-product.

DEQ Response: The text in the proposed permit was identical to that found on page 1 of Nestlé's Tier II application submittal. The text of the issued permit has been altered as requested by the comment.

Comment #4: Paragraph 3.

Change "The facility utilizes natural gas fuel burning equipment for the generation of process steam for drying, frying and air make-up units."

To "...generation of process steam for peeling, blanching, drying, frying, and air make-up units."

Reason: The process of peeling and blanching also require the generation of process steam.

DEQ Response: The permit text has been altered as requested. Nestlé Brands is correct in that the blanching and peeling operations should also be incorporated.

#### FUEL BURNING EQUIPMENT

Comment #5: Section 3.1.2.

Change "The natural gas flow meter shall be installed by January 1, 1996."

To "The natural gas flow meter shall be installed by February 1, 1996."

Reason: The proposed permit is under public comment until December 18, 1995. It is unreasonable to expect the installation of the natural gas flow meter in such a short time period. The date change will allow the installation of the flow meter after the permit has been issued.

DEQ Response: The date has been altered as requested. The January 1, 1996, date was incorporated as submitted by Nestlé Brands in the application materials. However, due to an ever-lengthening time line for finalization of the proposed permit, the required public comment period was initiated later than anticipated.

#### PROCESS LINE

Comment #6: Section 1.1 Process Description; Paragraph 2

Change "The Specialty Line product subjects the potato material to the same drying, frying, and freezing operations prior to packaging."

To "The Specialty Line process subjects the potato material to the same peeling, blanching, drying, frying, and freezing operations prior to packaging."

Reason: The Specialty Line utilizes peeling and blanching as part of the process.

DEQ Response: The permit text has been altered as requested.

Comment #7: Appendix A.

Change the PM/PM10 emission limit for the Nebraska boiler from 0.18 lb/hr to 0.677 lb/hr. This change reflects the data in the Departments Technical Analysis.

DEQ Response: Nestlé Brands' request is valid. The hourly PM/PM-10 emission limit for the Nebraska boiler has been altered to 0.68 lb/hr.

Comment #8: If there has been no infractions by this company's emissions facilities and all EPA and State regulations are in place (included in Permit) my only suggestion would be to require ON SITE inspection of the records required to be kept by DEQ, at least yearly and preferably TWICE yearly. Inspection of those records more often can be a beneficial prevention measure.

DEQ Response: Review of DEQ's Source File on Nestlé's Nampa facility revealed no past air quality-related violation(s). The Source File would also contain records of any "concerned party" complaint against the facility which would then be investigated by a DEQ inspection staff. No such complaints were found in the Source File.

Nestlé Brands' Nampa facility falls under the A2 designation with the issuance of Tier II Operating Permit #027-00059.

DEQ's current policy for the inspection of sources allows for one annual scheduled inspection for a facility of this classification (assuming an absence of past air quality compliance problems including information gathered from DEQ inspections and citizen/affected industry complaints).

The classification system utilized by DEQ is based on the following: The source classification code is based on the largest total of any pollutant emitted by a facility. These codes include the following: A1, A2, or B.

A1: Any stationary source whose actual emissions or potential emissions while operating at the design capacity are equal to or exceed 100 tons per year of any pollutant.

At the present time, DEQ staff resources are limited, and any increase in the frequency of inspections is not likely.

Comment #9:

Source Testing should be a yearly requirement.

DEQ Response:

There are no additional provisions in the proposed Tier II permit for source testing of any of the facility's existing air pollution sources. No other State of Idaho or federal regulations requiring additional source testing applies to the Nestlé facility according to the information provided and certified for accuracy, completeness, and truthfulness by the applicant.

DEQ cannot impose additional source testing requirements on the facility without justification. As stated above, there are no records on file of past non-compliance with any applicable State or federal air quality regulations. The source is located in an area designated as either attainment or unclassifiable for adherence to the National Ambient Air Quality Standards for PM<sub>10</sub>, SO<sub>x</sub>, VOCs (ozone precursors), NO<sub>2</sub>, and CO.

The applicant performed source testing on emissions units to provide better information for determining which permitting requirements applied to their facility, rather than for any demonstration of compliance with an applicable testing requirement. At this point, no additional source testing shall be incorporated into Nestlé's Tier II Operating Permit.